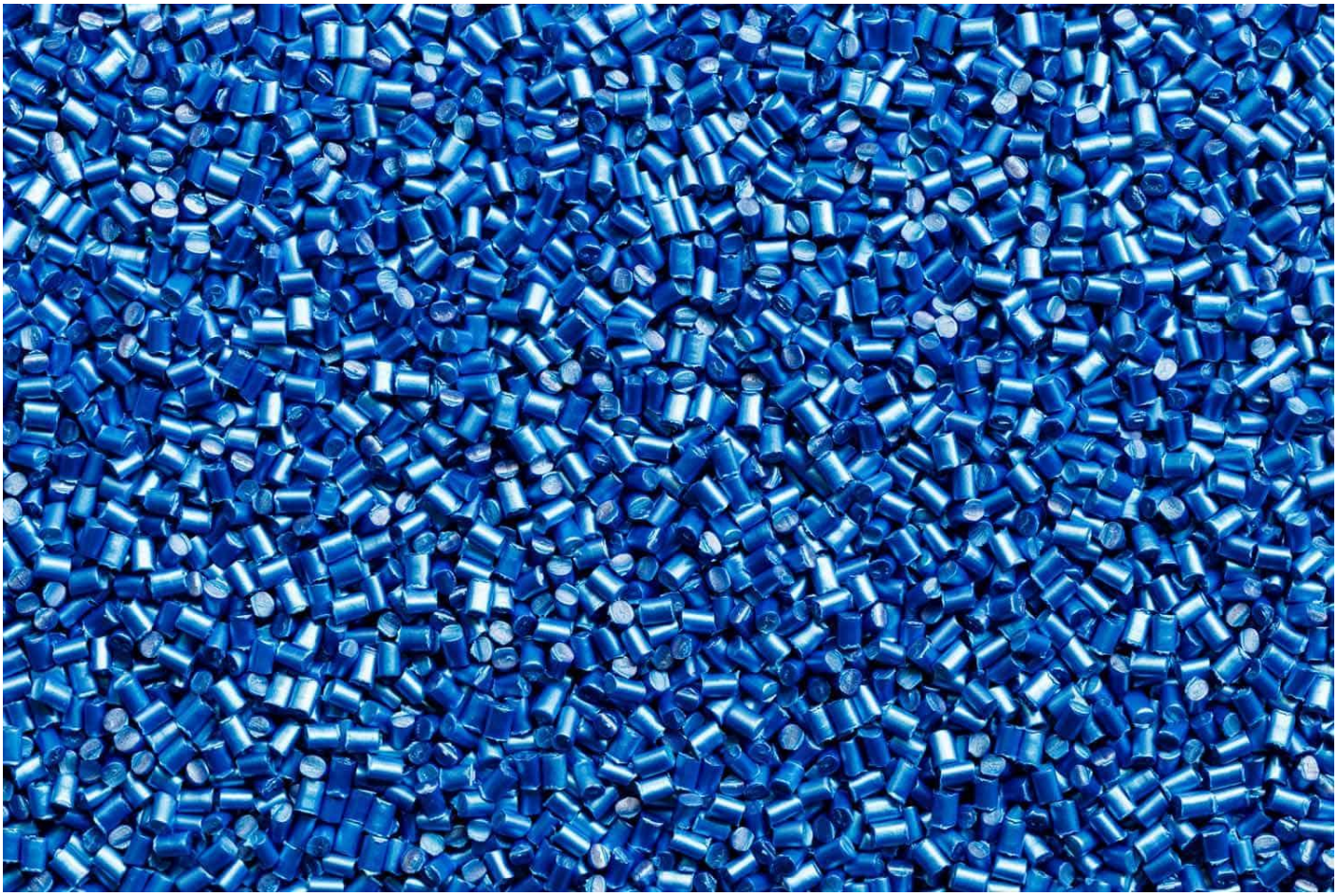
SERAPHIM PLASTICS

Can the Same Plastic Be Recycled Endlessly?

There is a lot about recycling the general public just doesn't know. For example, few people truly understand how plastic recycling works despite faithfully putting their green recycling bins to the curb every week. It is easy to participate in a curbside program and just assume plastic can be recycled endlessly. But guess what? It can't be. Recycling has its limits.



Perhaps some of the confusion related to recycling programs has to do with what we learned as kids. Having been born in 1965, this writer was a product of 1970s education. Recycling was just beginning to come into its own when I was in grade school. I just assumed, based on what my teachers told me, that plastic could be endlessly recycled forever. And because I had never researched it for myself, I continued to believe it well into adulthood.

My own ignorance perfectly illustrates why so many people in the Western world have unrealistic expectations of recycling. It explains why so many people are shocked to learn that curbside recycling programs don't really work. But enough of that. This post is supposed to be about endless plastic recycling.

Clean Industrial Plastics

As a commercial plastic recycler, Seraphim Plastics deals only in industrial plastic waste. We might purchase waste from an injection mold company who sells us all the scrap their machines produce. At the same time, we might purchase loads of plastic pallets from a distribution warehouse on the other side of town.

The plastics we deal with are relatively easy to recycle because they are pure – in the sense that they are not mixed with materials that can't be recycled. What we purchase ends up being sent through a series of shredders and grinders to

reduce it to a usable size. We then turn around and sell the regrind to companies who combine it with virgin plastic to manufacture new products.

This leads us to the question of endless recycling. Manufacturers do not use our regrind exclusively. They can't. They have to mix it with virgin plastic in order to maintain the integrity of their products. Why? Because every time plastic is heated in order to mold it into a specific shape, it loses some of its integrity. The same goes when it is ground down in the recycling process.

Making Recycled Plastic Usable

In theory, recycling the same plastic over and over again would eventually result in it being unusable. After so many cycles, it simply would not have enough structural integrity. That's why manufacturers use recycled plastic as a supplement to virgin material. Combining it with virgin material makes recycled plastic usable for longer.

The tricky part is deciding on a ratio. How much recycled regrind do you add to your virgin plastic? How will the regrind affect the overall integrity and quality of your piece? Fortunately, plastics manufacturers have some very smart people to figure it all out. They determine ratios for each individual piece based on its properties and the demands placed on it.

Recycling Helps A Lot

The summation of this entire discussion is as simple as saying that recycling helps a lot. No, you cannot endlessly recycle the same plastic forever. It eventually breaks down to the point of being unusable. But you can combine recycled material with virgin plastic for supplemental purposes.

Recycling industrial plastic keeps waste out of landfills. It reduces dependence on virgin plastics and, by extension, petroleum products. As long as manufacturers can still supplement with regrind, we can continue recycling industrial plastic and reintroducing it to the manufacturing process. That is what we do at Seraphim Plastics.